What is claimed is:

1. A constant velocity joint comprising:

a hollow housing having an opening at one end, an inner face of the housing being provided with three guide grooves extending in a axial direction of the housing and being spaced apart equally in a circumferential direction, each groove having a pair of side faces opposed to each other, extending in the axial direction, and a bottom portion connecting the side faces;

a tripod having three radially extending trunnions positioned in the grooves of the housing, the trunnions being spaced apart equally in a circumferential direction and mounting respective inner rollers to outside end portions of respective trunnions, and with respective outer rollers being mounted on the outer faces of inner rollers through needle bearings, the outer faces of the outer rollers being shaped so as to allow movement only in an axial direction of the guide grooves, each of the trunnions having a generally spherical outer face, and each of the inner rollers having a generally spherical outer face, respective generally spherical outer faces of the inner rollers having approximately same dimensions as respective generally spherical outer faces of the trunnions such that respective inner rollers may rotate and pivot freely on respective outer faces of respective outer face of respective trunnions; and

a partially cylindrical area formed on each outer face of each trunnion inclined relative to a trunnion centerline passing through a center of the generally spherical outer face of the trunnion perpendicular to a trunnion axis of the

trunnion passing through the center of the generally spherical outer face of the trunnion, and being on a face in contact with the inner roller at a joint angle of zero.

2. A constant velocity joint according to claim 1, wherein:

a diameter (d) of each partially cylindrical area provided on each outer face of each trunnion is related to an inner diameter (D) of each inner joint end surface of each inner roller in accordance with the following formula:

$(d) < (D)$

and $5° \leq$ angle(θ),

wherein the angle(θ) is an angle of a line connecting between the center of the trunnion and a farthest point, relative to the trunnion centerline, an intersection line being an edge line of the partially cylindrical area at an inner side of a joint, the farthest point being on a location where the intersection line is farthest from a center of a joint, on the outer face of the trunnion.

3. A constant velocity joint, comprising:

a hollow housing having an open end and an inner face formed with three axially extending circumferentially spaced guide grooves;

a tripod disposed in said housing having three circumferentially spaced trunnions extending radially outwardly along respective trunnion axes into said guide grooves, each trunnion having an outer surface that is part spherical;

a roller assembly carried on each of said trunnions within said guide grooves and supported for rotational, angular and axial movement relative to said trunnions; and

a cylindrical relief area formed on said outer surface of each of said trunnions inclined relative to each of said respective trunnion axis.

4. The constant velocity joint of claim 1 wherein each of said cylindrical areas has a predetermined diameter and said roller assemblies each have an inner end diameter equal to or greater than that of said cylindrical area.

5. The constant velocity joint of claim 1 wherein each of said trunnions includes a trunnion centerline perpendicular to said trunnion axis, said cylindrical relief area being inclined relative to said trunnion centerline.

Sub C2> 6. A method of installing a roller assembly of a tripod constant velocity joint on a trunnion of the joint having a part spherical outer surface and a trunnion axis, comprising:

forming a cylindrical relief area on the outer surface inclined at an angle relative to the trunnion axis; and

aligning the roller assembly angularly with the cylindrical relief area and guiding the roller assembly over the cylindrical relief area onto the trunnion.

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